

## Limiting Reactant Calculations

### Review

1. How many grams are in 0.0626 mol of  $\text{NaHCO}_3$ ?
  
  
  
  
  
  
  
  
  
  
2. 62.0 g of chlorine is used in the following reaction to generate sodium hypochlorite (bleach). Find the mass of all other reactants and products in this reaction.



- a. NaOH
  
  
  
  
  
  
  
  
  
  
- b. NaOCl
  
  
  
  
  
  
  
  
  
  
- c. NaCl
  
  
  
  
  
  
  
  
  
  
- d.  $\text{H}_2\text{O}$



4. Potassium tetrachloroplatinate,  $K_2PtCl_4$ , and ammonia,  $NH_3$ , react to produce the anticancer agent cisplatin,  $Pt(NH_3)_2Cl_2$ , and potassium chloride. Assume that 20.0 g of potassium tetrachloroplatinate and 20.0 g of ammonia are allowed to react.
- Write and balance the chemical equation of this reaction.
  - Which reactant is limiting, and which is in excess?
  - How many grams of the excess reactant are consumed? How many grams remain?
  - How many grams of cisplatin are formed in this reaction?
5. On the back of this paper, please complete the following problems. Attach additional paper if necessary.
- p. 369 #22-24
  - p. 372-73 #27-32